# Montana Board of Regents

# 2006-2010 Strategic Plan



**July 2006** 

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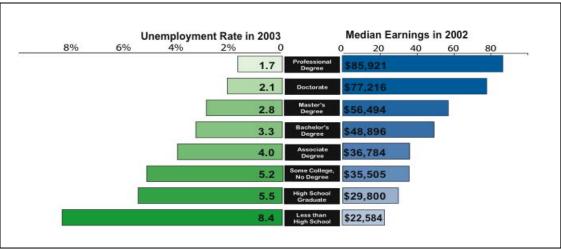
#### Preface and Introduction

#### History

This year the oldest units of the Montana University System celebrate their 114<sup>th</sup> anniversary. It would be an understatement, and a well-worn cliché, to say that much has changed since Montana's 3<sup>rd</sup> Legislature established four state colleges in Bozeman, Missoula, Butte, and Dillon. What may be more interesting is how much has not changed. Now, as then, education is a cornerstone of our society and our economy. An educated citizenry has been recognized as a foundation for our nation's success since the time our country declared its independence. The Morrill Act of 1862 (establishing the Nation's land grant colleges), the Second Morrill Act of 1892, and the GI Bill (which five decades later opened up the possibility of a college education for millions) consistently rank among the handful of major policies that have fundamentally shaped our country's prosperity during the last century.

What has changed is the minimum level of education necessary to successfully participate in our society and economy. Postsecondary education has long been a gateway to success for our best and brightest and more privileged citizens. Now it is essentially a requirement for almost everyone. Many years ago, an eighth grade education was recognized as sufficient for most citizens. This gave way to a standard that a high school diploma was necessary for entrance to the middle-class and the chance to have a comfortable life. In the 21<sup>st</sup> Century, the hurdle has plainly moved to where at least some postsecondary education is now necessary for even modest prosperity in any high-wage, industrialized economy. As the chart below plainly shows, employment and income are inextricably linked to educational attainment.

#### Unemployment and Earnings by Education Level



Source: Tom Mortenson, Postsecondary Opportunities

It is therefore ironic that, during a time of increasing globalization and a need for much broader access to postsecondary education, state support for higher education is declining. This is true not just in Montana, but also across the country. Nationally, state funding as a proportion of total public university budgets has declined about 40% in the past two

decades. In Montana, the state's contribution to the cost of educating a student has declined by half -- from almost 80% of the cost in 1985 to about 40% in 2005.

Unfortunately, tuition remains the single largest factor in closing the gap between the cost of public higher education and the amount of funding provided by the state. Since no state institution of higher education can maintain a quality system of education in the face of a 40% decline in funding, tuition has had to increase. And it has increased – a lot. In the past decade tuition has nearly doubled for Montana residents. The state's contribution per student – in dollars – has remained essentially the same for ten years, without increases for even some price inflation. Again, Montana has much company. During the past decade, average tuition increases for all U.S. public 4-year colleges almost precisely mirror Montana's increases.

But the higher education system in Montana is not entirely a blameless victim of the legislative budget ax. Elected officials are heavily persuaded by their respective constituents' input and always face difficult budget choices. Had the declining proportion of state support been accompanied by a great outcry from the Montana citizenry it is doubtful such reductions would have been sustained for long. Clearly, there has not been a consensus among our citizens, Governors, and legislators as to the critical need for greater public support and correspondingly lower tuition levels. For this, the higher education community has to shoulder some of the blame. Had the university system been more effective at consistently communicating the value of a strong public higher education system and the consequences of declining state funding, it is likely more support would have been forthcoming.

#### Goals

The discussion of the Montana University System history is not meant to affix blame collectively or individually. The point is simply that the state's prosperity depends on a high-quality and accessible postsecondary education system and the university system's future likewise depends on the state's prosperity. This strategic plan focuses on just this symbiotic relationship with three fundamental goals:

- Increase the overall educational attainment of Montanans through increased participation, retention, and completion rates in the Montana University System.
- Assist in the expansion and improvement of the state's economy through the development of high value jobs and the diversification of the economic base.
- Improve institutional and system efficiency and effectiveness.

Maintaining the high quality of our institutions and the education provided to our students is not listed as an explicit goal. This is because it is THE MOST IMPORTANT consideration for every goal and initiative of the Montana University System and is considered to be an integral part of every component of this strategic plan.

The first goal reinforces what has always been the core mission of public higher education – to provide access to a quality postsecondary education for our citizens. In light of trends

during the past decade, access requires affordability and this does mean, in part, increased state support. It also means the university system needs to do a better job of reaching remote, disadvantaged, and non-traditional students; using technology to deliver education; and working more closely with K-12 education to make the transition to college seamless.

The second goal recognizes the two critical roles that a university system must play, for both traditional industries and the "new-economy," in an increasingly global marketplace. It must train a skilled workforce for the types of jobs that exist, or will exist, in the economy. It is also a principle source of research and technology that fuel the innovation vital for any successful company to grow.

The third and final goal gives a high priority to stewardship of the resources we have been provided to help attain these goals. How well the Montana University System manages costs, allocates resources, and tracks this accountability with hard data is critical for improving credibility and keeping higher education accessible for all our citizens.

#### Change is Vital

The good news is that, despite some disturbing trends, Montana still has an excellent university system. For the past decade, enrollment has been increasing – a function mostly of a demographic bubble moving through our K-12 system – and growth can ameliorate otherwise visible financial troubles. Although students have been bearing an increasingly heavy financial burden, they have generally been able to work and borrow enough to pay for postsecondary education. Heavy debt has other consequences, particularly for posteducation retention in the workforce, but it does mean most students can at least find a way to attend college. And, the university system has been able to dramatically raise non-resident tuition, which is about 40% higher than costs, to help offset declining state support for resident students. Without these non-residents, resident tuition would be about 25% higher than it is currently.

But Montana now faces our own version of the perfect storm. The demographic bubble of 6-18 year olds in Montana has given way to a trough. Slowed population growth in this age group is a national phenomenon, but it is much more pronounced in our state. We are now in the first year of what we know will not be just slowed growth, but a significant <u>decline</u> in the number of in-state high school graduates. In ten years we will have about 1,500 fewer graduating high school seniors per year than we have this year. At the same time, the state's economy, like the rest of the nation, is facing a serious shortage of skilled workers during the next two decades.

Also, for the first time, the average cost of higher education in the state has outstripped the capacity of many students and their families to fund higher education through savings and borrowing. Concurrently, the ability of our colleges to raise non-resident tuition to generate additional revenue may have reached its limit. Further large increases will make our tuition increasingly uncompetitive in the region and could lead to declining non-resident enrollments.

New forces in demographics and the global economy mean we can ill afford to proceed down the same path we have been following for the past decades. With this strategic plan, the Montana University System recognizes that we must work together with state government and our private sector to make significant changes in the manner in which we support each other. Our state deserves, and depends on, a collaborative and successful effort.

### Taking Action

#### Postsecondary Education Policy and Budget Subcommittee

The development of this strategic plan began two years ago with two initiatives. The first was to work more closely with the interim legislature to develop a set of mutually agreed upon accountability measures that would guide the Montana University System and evaluate progress. Working with the Postsecondary Education Policy and Budget (PEPB) Subcommittee of the 57<sup>th</sup> Legislature, the Board of Regents did develop this set of accountability measures in July 2002. Subsequently, the PEPB subcommittees of the 58<sup>th</sup> and 59<sup>th</sup> Legislature have updated the accountability measures. This latest set of agreed-upon measures consists of a core set of six policy goals and these form one base for this strategic plan.

#### Shared Leadership for a Stronger Montana Economy

The second initiative was to work with the PEPB Subcommittee to explore new ways for the Montana University System to take a more direct leadership role in the state's economic development. This overall effort, called "Shared Leadership for a Stronger Montana Economy", engaged a broad range of Montanans to prioritize specific initiatives that would help establish a new role for the Montana University System in strengthening the state's economy. The Governor's Office and several legislative interim committees were included in the effort. In July, 2004, the Board of Regents and the PEPB Subcommittee met jointly and agreed on three priority initiatives for immediate implementation:

- Develop stronger business-university system partnerships for workforce training;
- Remove barriers to access for postsecondary education;
- Expand distance learning programs and training.

During the subsequent three months, the Commissioner's Office and the Governor's Office jointly conducted fifteen statewide "community listening sessions" to get statewide input on the three priority initiatives. A steering committee was formed for each initiative, each with a broad cross-section of Montana leaders. Steering committees met between November 2004 and January 2005 and reached consensus on a set of the most serious problems in Montana and recommendations to address those problems. The reports from these steering committees and their recommendations form the second base for this strategic plan.

#### Strategic Plan Development

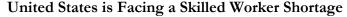
Finally, the Board of Regents have been meeting with legislators, the Governor's Office, campus leaders, and the public to determine the top priorities for the Montana University System over the next five years. This work included two planning sessions, in July 2005 and January 2006, and the engagement of national experts in higher education policy. These experts included Dennis Jones, President of the National Center for Higher Education Management Systems, and Cecelia Foxley, former Commissioner of Higher Education for Utah and past President of State Higher Education Executive Officers.

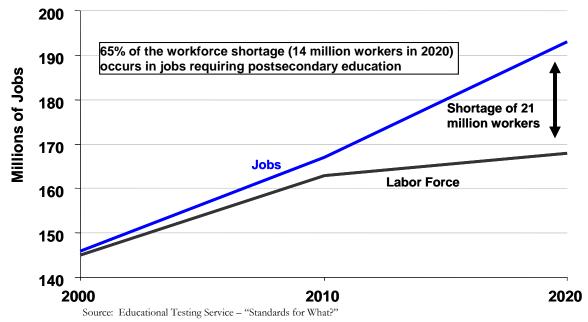
This strategic plan was approved by the Board of Regents in July 2006. It combines the ongoing efforts with the legislature, particularly the PEPB subcommittee, and Shared Leadership. It describes what will be the university system's priorities, how we will accomplish these priorities, and how we will measure our progress.

## Goal I: Increase the overall educational attainment of Montanans through increased participation, retention and completion rates in the Montana University System.

#### Postsecondary Education is Critical

In Montana, and the entire United States, the global economy has made postsecondary education "the price of admission" to the middle class and increasing wages over time. For instance, 31% of manufacturing jobs -- traditionally the foundation of our middle class in America -- now require education beyond a high school diploma compared with only 8% thirty years ago. In virtually all industries, jobs that do not require high skill levels are moving to low-wage economies and those that remain increasingly require advanced training. During the next fifteen years, this country is projected to have a shortage of 21 million workers and two-thirds of these shortages will be in jobs requiring some postsecondary education. Demographic projections make it likely that shortage will be more pronounced, not less, in Montana relative to the rest of the country.





#### The Leaking Pipeline

Despite the increasing importance of education to the individual and the state, Montana is facing alarming trends. Montana's public high school graduation rates peaked at 87% in 1993 and dropped to 79% in 2004. Approximately 8% of teenagers between the ages of 16 and 19 are considered 'dropouts' – neither a high school graduate or enrolled in school nor looking for work. Montana also faces low college participation rates: for every 100 Montana students who enter ninth grade, less than half are likely to graduate from high school four

years later <u>and</u> enroll in college within a year. Our public higher education completion rates also lag behind the rest of the nation. Only 42% of students who enter a Montana four-year institution actually graduate from that institution within six years, compared to 48% in the fifteen western states (excluding California, 2004 data), and students from our least affluent counties have dramatically lower graduation and participation rates than the state's average.

#### Strategic initiatives we will undertake to achieve this goal

- Secure adequate funding for the educational units sufficient to limit tuition increases to 5% at four-year campuses and 0% at two-year campuses.
- Consolidate existing scholarship/aid programs and increase need-based aid funding in the 2008-09 biennium.
- Create and maintain an integrated student data system with capability to track students from K-12, through postsecondary education, into the Montana workforce.
- Implement a system-wide gateway for on-line courses and expand distance learning coordination and programs.
- Expand Indian Education for All in the Montana University System.
- Continue to support investment in critical infrastructure, particularly deferred maintenance, at all campuses including our community colleges.

Note: One-Time-Only Requests for the 2008-09 biennium that have not yet been approved by the Executive Budget Office or the Board of Regents are not included.

# Goal I (1): Prepare students for success in life through quality higher education.

#### Background

According to Tom Mortenson of the Pell Institute, postsecondary education "has become the dominant factor in the growth of personal incomes and the living standards of people, families, cities and states." It is a well accepted fact that more education correlates highly with increased wages. Over a forty year working career, those with some postsecondary education will earn about 75% more than those who have only a high school education. But the correlations between higher educational attainment and non-monetary benefits are equally strong. Improved health, decreased crime, higher charitable giving, and greater civic participation, among others, are all strongly related to the education of the individual and the overall education levels of a community. In addition to all the important things a university system does on a daily basis for the state and its communities, a central tenet of our mission must be to continue to prepare students for life by getting them into, and successfully through, a postsecondary education.

## 1) Improve postsecondary education participation rates, with particular attention to Montana residents in MUS institutions.

Table 1.1.1

Montana College Continuation Rate

Percent of Recent Montana High School Graduates Enrolled as Degree/Certificate-seeking Students in the Fall Semester Immediately Following Graduation

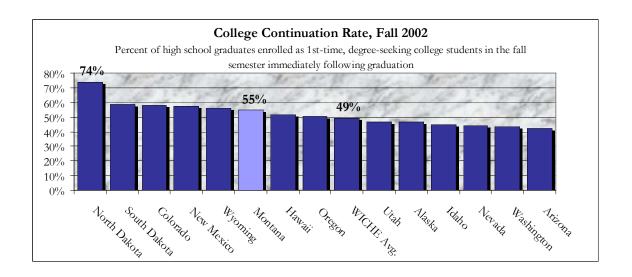
College Continuation Rates	1992	1994	1996	1998	2000	2002	2004	2006 estimate	2010 projected
# of MT High School Graduates (public & private)	9,392	10,009	10,594	11,157	11,438	11,098	11,147	10,320	10,077
MT Continuation Rate % of MT Grads Enrolling in College	51%	55%	55%	56%	54%	55%	57%		
WICHE Continuation Rate % of Grads in WICHE States Enrolling in College	51%	52%	53%	50%	49%	49%	NA		

Montana High School	1992	1994	1996	1998	2000	2002	2004	2006	2010
Graduates								estimate	projected
% of MT Grads Enrolling in	31%	35%	35%	36%	35%	35%	37%	40%	43%
MUS Institutions	3170	3370	3370	3070	3370	3370	3/70	4070	4370
% of MT Grads Enrolling in	407	407	407	F0/	20/	407	F0/		
College (In-state, non-MUS)	4%	4%	4%	5%	3%	4%	5%		
% of MT Grads Enrolling in College (Out-of-State)	16%	16%	16%	15%	15%	16%	15%		

source: NCES, IPEDS Fall Enrollment Survey; high school enrollment - WICHE, Knocking at the College Door - 2003

Data Definition: First-time degree/certificate-seeking undergraduate students who graduated from a Montana high school in the past 12 months and enrolled in a Title IV Eligible, 2 or 4-year post-secondary institution in the summer or fall semester immediately following graduation.

Note: calculations for WICHE states exclude CA.; MUS calculations include community colleges



#### 2) Increase retention rates within the Montana University System.

Table 1.1.2

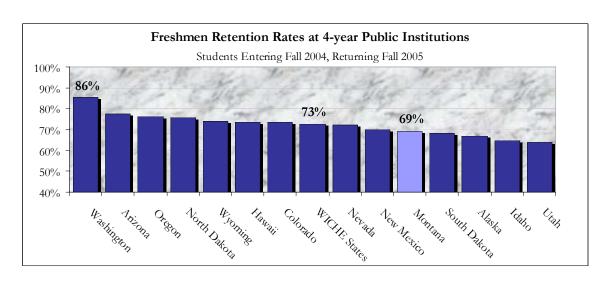
Freshmen Retention Rates

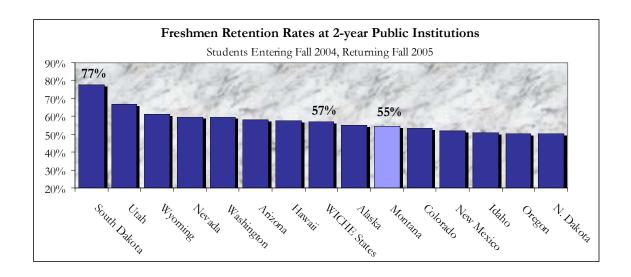
Percent of 1st-time, Full-time, Degree-seeking Freshmen Returning for a Second Year of Enrollment

Institutional Type	Fall 2002 Freshmen Returning in Fall 2003	Fall 2003 Freshmen Returning in Fall 2004	Fall 2004 Freshmen Returning in Fall 2005	Fall 2006 Freshmen Returning in Fall 2007	Fall 2009 Freshmen Returning in Fall 2010
4-year Institutions					
MUS	64%	68%	69%	70%	75%
WICHE States (weighted avg., net of CA)	NA	73%	73%		
2-year Institutions					
MUS	63%	57%	55%	55%	57%
WICHE States (weighted avg., net of CA)	NA	57%	57%		

source: IPEDS Fall Enrollment Survey

Note: data for WICHE states includes public, two and four-year, Title IV degree granting institutions only; in 2002-2003 IPEDS reporting was optional, as a result, not all MUS campuses reported data and WICHE averages are not available





#### 3) Increase completion rates for MUS Campuses.

Table 1.1.3

#### **Graduation Rates**

4-year Inst.: Percent of 1st-time, Full-time, Degree-seeking Students Earning Bachelor's Degrees within 6 Years 2-year Inst.: Percent of 1st-time, Full-time, Degree-seeking Students Earning Associate Degrees within 3 Years and Certificates within 1.5 years

		Graduating Classes							
Institutional Type	2000-01	2001-02	2002-03	2003-04	2004-05	<b>2006-07</b> (est.)	<b>2009-10</b> (goal)		
4-year Institutions						(636.)	(8041)		
MUS	41%	38%	43%	42%	41%	42%	45%		
WICHE States (weighted avg., w/o CA)	47%	48%	49%	49%	50%				
2-year Institutions									
MUS*	37%	35%	33%	36%	38%	38%	40%		
WICHE States (weighted avg., w/o CA)	25%	25%	27%	26%	28%				

source: IPEDS Graduation Rate Survey

Note: data for WICHE states includes public, two and four-year, Title IV degree granting institutions only

## Goal I (2): Make higher education more affordable by offering more need-based financial aid and scholarships.

#### **Background**

High tuition does not create as much of a barrier to education if it is coupled with relatively high tuition assistance. Virtually every state in the U.S. has a substantial need-based aid program, but Montana is far behind every other state in the region in the amount of aid provided our students. Montana appropriations for need-based aid are about \$97 per student as compared to \$210 per student for the other fifteen western states (excluding California, in 2005). Even in Montana's two-year colleges – in most states the low-cost point of entry for many students – cost is increasingly a barrier. On average, a Montana family pays 25% of its income at two-year colleges compared to 16% nationally.

Federal loan limits no longer provide many Montana students and families with sufficient lending capacity to satisfy the cost of education. For the first time, the cost of education (including room and board) now exceeds the amount of borrowing available to many Montanans. There simply isn't enough need-based aid to serve our Montana residents and this lack of aid impacts enrollment, persistence, and success in postsecondary environments.

# 1) Reduce the gap between Expected Family Contribution (EFC) and Average Cost of Attendance.

Table 1.2.1

Cost of Attendance Gap

Difference Between Average Cost of Attendance and Expected Family Contribution

MUS Institutions	Cost of Attendance-EFC	2003-04	2004-05	2005-06
4 voor	Average Cost of Attendance	\$12,901	\$13,051	\$14,048
4-year Institutions	Expected Family Contribution	\$5,010	\$5,241	\$6,299
Ilistitutions	Difference	\$6,602	\$6,449	\$7,599
2 2002	Average Cost of Attendance	\$11,018	\$11,301	\$11,717
2-year Institutions	Expected Family Contribution	\$3,094	\$3,207	\$3,844
Institutions	Difference	\$7,924	\$8,094	\$7,873

#### Definitions:

note: Information for 2-year institutions in this table represents: MT Tech-COT, MSU Great Falls, UM-Helena; MSU-Great Falls and UM-Helena costs of attendance are based on students living off-campus (w/o family).

While this indicator is useful, goals were not set because projections related to expected family contribution are subjected to federal rules and family income that are difficult to predict.

<sup>1)</sup> Cost of Attendance equals the average cost for full-time, 1st-time, resident undergraduate students living on-campus for the full academic year (tuition and fees, books and supplies, room and board, and other expenses are those amounts used by financial aid offices for determining eligibility for student financial assistance).

<sup>2)</sup> Expected Family Contribution (EFC) represents a measure of financial strength on the basis of income and assets that the average resident student or his/her family is expected to contribute toward the cost of attendance. EFC calculations are established by law and used to determine eligibility for federal student aid

source: IPEDS Institutional Characteristics, MUS institutional reporting

# 2) Increase the percentage of students who receive financial aid or scholarships.

Table 1.2.2

Financial Aid Recipients

Percent of 1st-time, Full-time, Degree-seeking Students Receiving Financial Aid\*

Institutional Type	2000-01	2001-02	2002-03	2003-04	2004-05
4-year Institutions					
MUS	79%	82%	80%	78%	81%
WICHE States (weighted avg.)	68%	69%	69%	71%	NA
2-year Institutions					
MUS	74%	65%	71%	72%	70%
WICHE States (weighted avg.)	60%	62%	62%	61%	NA

<sup>\*</sup>Grants, loans, assistantships, scholarships, fellowships, tuition waivers, tuition discounts, veteran's benefits, employer aid (tuition reimbursement) and other monies (other than from relatives/friends) provided to students to meet expenses.

#### 3) Increase the average aid/scholarship award amount.

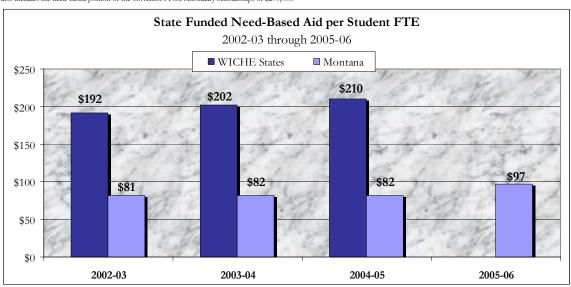
Table 1.2.3

State Funded Need-Based Aid per Student FTE

States	Need Aid/FTE	2002-03	2003-04	2004-05	2005-06	2007-08 (goal)	2009-10 (goal)
WICHE States	Need-Based Aid	\$220,273,000	\$237,163,566	\$248,419,583	NA		
(net of CA)	Aid per FTE	\$192	\$202	\$210	NA		
Montana	Need-Based Aid	\$2,825,000	\$2,941,566	\$2,951,629	\$3,447,442	\$4,100,000	\$5,700,000
Miditalia	Aid per FTE	\$81	\$82	\$82	\$97	\$114	\$158

source: National Association of State Student Grant and Aid Programs. National Center for Education Statistics, IPEDS.

note: student FTE represents public undergraduate and graduate enrollments; need-based aid for MT represents state funding of MTAP, MHEG, and federal/state matching grants; 2005-06 also includes the need-based portion of the Governor's Post Secondary Scholarships of \$270,000.



source: IPEDS Student Financial Aid Survey; note: data for WICHE states includes public, two and four-year, Title IV degree granting institutions only and excludes CA; MUS 2-year institutions include community colleges.

## Goal I (3): Promote postsecondary education affordability.

#### Background

Montana faces increasingly high postsecondary education costs relative to income levels. In 1994 Montana's average tuition was \$27 below the 15 western states' average; in 2004 it was \$703 above the average. Montanans must now pay a 40% higher share of their incomes for resident tuition and fees than residents of the other western states. The average student debt for a Montana university graduate is \$20,000 and rising. With these trends, it is no surprise that in 2000-01 the college participation rate for Montana students from low-income families was 28% compared to 42% for the general population. According to *Measuring Up 2000* (a national report card on higher education), the state of Montana received a grade of "D-" for affordability. In 2002, the affordability grade sank to "F" and remained there in 2004.

For resident students, the price of an education is generally governed by a simple relationship:

(Cost of a Quality Education) – (State Support) = (Tuition & Fees for Student). The Board of Regents has set aggregate system tuition targets that should, over time, move Montana toward the regional (WICHE) average and continue to make two-year education a low-cost point of entry for students:

- Increase resident four-year tuition at no more than 5% per year;
- Maintain resident two-year tuition at current levels (0% per year);
- Increase non-resident tuition at no more than 5% per year.

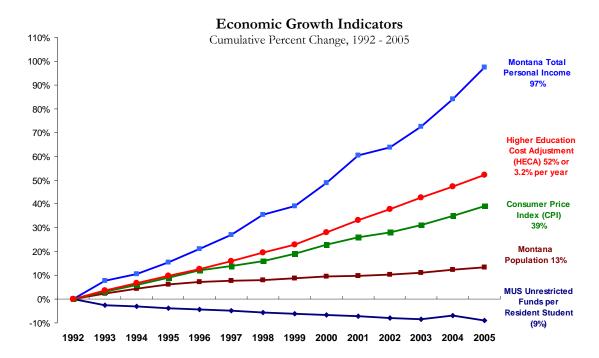
Because these tuition targets are aggregate, system-wide targets, the tuition increases at individual campuses may be above or below the target levels based on the need and characteristics of a particular unit.

Montana has been, and continues to be, very efficient in delivering postsecondary education at a low cost when compared to other states in the region (see Strategic Plan Goal 3.2). In order to maintain a quality university system, the Board of Regents has set an aggregate expenditure target of 4.3% per year increases for the university system. While this annual increase is somewhat higher than the SHEEO Higher Education Cost Adjustment average (State Higher Education Executive Officers index of inflation for postsecondary education nationally) it reflects a need for the Montana University System to regain some lost ground of the past two decades in order to maintain high quality.

To maintain expenditure and tuition targets, the amount of state support will have to increase from the historic levels of per-student appropriations of the past 10 years. By 2010, the state will need to provide the university education units (including community colleges) with \$170 million of support. Extrapolating historic "present-law" base funding increases, the amount of state support through 2010 will fall approximately \$50 million short of the amount needed to keep tuition increases at target levels. This is the equivalent of about \$8 million of on-going base funding (\$220 per FTE) for the university system's education units in each of fiscal years 2008-2010.

Other useful measures to compare Montana's public support for higher education relate funding to the state's per capita income, personal income, and median household income.

These measures all give an indication of Montana's support for higher education in relation to the state's wealth. All goals for 2010 for these measures include the Board of Regent's targets for tuition, expenditures, and state funding of education units.



# 1) Increase the amount of state support as a percentage of total personal income relative to peer states and historical levels.

Table 1.3.1

State Support for Higher Education Per Capita & Per \$1000 of Personal Income

	State	Support Per Ca	pita	State Support	Per \$1000 of Per	sonal Income
PEPB Peer	FY 1995*	FY 2005	FY 2010	FY 1995	FY 2005	FY 2010
States			(goal)			(goal)
Colorado	\$190	\$137		\$6.17	\$3.86	
Idaho	290	245		11.55	9.37	
Minnesota	291	248		9.28	6.90	
Montana	198	167	200	8.18	6.08	6.30
North Dakota	316	317		12.12	10.86	
Oregon	239	172		8.41	5.68	
South Dakota	184	211		6.97	6.93	
Utah	274	258		11.63	9.90	
Washington	232	225		7.49	6.50	
Wyoming	433	586		15.49	17.24	
United States	\$239	\$243		\$7.91	\$7.42	
WICHE States	284	275		10.24	9.11	
PEPB Peers	272	266		9.90	8.58	

<sup>\*</sup>adjusted for inflation

source: State Higher Education Executive Officers, State Higher Education Finance Report (FY 05)

PEPB Peers include: CO, ID, MN, ND, OR, SD, UT, WA, WY; data represent simple averages

note: State Support includes state & local govt support for higher education general operating expenses; WICHE State averages exclude CA.; 2005 MT population equals 935,670; assumptions: annual population increase = 1%, annual increase in personal income = 4%; in order to compare to peer states all higher education funding is used in the calculations, including funding for agencies

## 2) Decrease tuition as a percentage of median household income.

Table 1.3.2

#### Ratio of Tuition and Fees to Median Household Income

Public Institutions, 1993-94, 2003-04

Institutional Type	1993-94	1998-99	2003-04
2-year Institutions			
Montana	5.0%	6.2%	7.4%
WICHE States	3.4%	3.7%	4.3%
4-year Institutions			
Montana	6.8%	8.4%	10.5%
WICHE States	5.4%	6.2%	7.4%
Doctoral Institutions			
Montana	7.6%	8.9%	12.1%
WICHE States	6.2%	7.0%	8.4%

source: WICHE
note: Tuition and fees used in the calculation are the mean tuition and fees within each sector for each state. The WICHE average median household income was calculated as a simple average of the 15 member states (excluding CA).

While this indicator is useful, goals were not set because projections related to median income are difficult to accurately project.

# Goal I (4): Work collaboratively with the K-12 education system to increase high school academic preparedness, completion, and concurrent enrollment programs.

#### Background

With the precipitous decline in high school graduates over the next decade, the university system's ability to grow and meet the increasing need for skilled workers in the state depends on getting a higher proportion of students to enter postsecondary education. We also know that most students' expectations of whether or not they will attend college are set in middle school and early high school. This means any successful strategy must involve a partnership with K-12 education to reach students early and often.

Many Montana students and families need additional support and assistance in order to aspire to, prepare for, and successfully complete postsecondary education. According to *The Education Resources Institute*, individuals from families with limited postsecondary experience are much less likely to have the personal or institutional connections through which students typically receive encouragement and guidance to pursue higher education. School counselors attempt to meet these needs for all students, but are often unable to do so as a result of limited time and resources. Montanans enrolling in postsecondary education sometimes also lack adequate preparation. The numbers of students taking college remedial courses is evidence of this problem. The issue is particularly pronounced for non-traditional students who have been out of high school for an extended period of time and typically require considerable remedial coursework to succeed in postsecondary education.

Dual enrollment programs serve to promote more educational options, save students' time and money on a college degree, provide greater academic opportunities for students in small rural schools, and increase student aspirations to go to college at the two- or four-year level. However, Montana's dual enrollment programs are not offered in a consistent manner across the educational system. They are few in number and inconsistent in nomenclature, prerequisites, cost and application. Consequently, a Montana student's access to dual enrollment is, to a large degree, dependent upon where they live and go to school.

Finally, it is important that Montana colleges are viewed as attractive options for our "best and brightest." As important as it is to improve college-going rates for our average students, it is equally important to retain more of our gifted students. The quality of an academic experience is greatly enhanced by diversity of the student body and by academic competitiveness among students. There is also a greater likelihood that students who leave the state for college will not return to our workforce. Clearly, it is in the interest of our students, colleges, and our economy that our public institutions are correctly viewed as a place to gain a world-class education at an affordable price.

# 1) Expand outreach to at-risk and disadvantaged students as to the importance and accessibility of postsecondary education and the quality of the Montana University System.

The Commissioner of Higher Education and the Board of Regents are working together with Montana's Student Assistance Foundation (SAF) and other partners to develop a statewide access network that will coordinate and promote access services throughout Montana. With assistance from the National College Access Network (NCAN), SAF, and the Department of Labor a comprehensive Inventory and Gap Analysis has been completed in March 2006. This analysis identified and mapped career and college outreach services throughout Montana. With NCAN's continued support, this group is working to design and implement steps to eliminate gaps in student support & outreach within the state.

The goal for 2006 is to identify long-term objectives and targets for measuring progress toward these objectives.

2) Expand outreach to top academic achievers graduating from Montana high schools as to the importance and accessibility of postsecondary education and the quality of the Montana University System.

Table 1.4.2

#### Top Performing Students in the Montana University System

Montana High School Graduates Attending MSU-Bozeman & UM-Missoula Note: Data are currently available for only MSU-Bozeman and UM-Missoula

MSU - Bozeman & UM - Missoula	Fall 2003	Fall 2004	Fall 2005
ACT Top Quartile			
Freshmen taking ACT	1,811	2,231	2,033
# of Freshmen scoring in top quartile*	605	715	676
% scoring in top quartile	33%	32%	33%
Top 10% of High School Class			
Freshmen Reporting High School Percentile	2,303	2,357	2,443
# of Freshmen in top 10% of high school class	373	388	394
% in top 10% of high school class	16%	16%	16%

\*score between 25 & 36 source: MUS institutional report

#### Goal for 2006-2007:

Develop additional measures for evaluating whether top academic achievers are entering the MUS and track those measures through improvements in the Student Data Warehouse for all campuses.

#### 3) Increase dual enrollment and advanced placement programs

Table 1.4.3

Advanced Placement Testing in Montana High Schools

	2000-01	2001-02	2002-03	2003-04	2004-05
Number of Students Taking Exam	1,688	1,886	1,927	1,996	2,189
Number of Exams Taken	2,368	2,763	2,726	3,029	3,250
Exams Scoring 3 or Higher	1,543	1,964	1,894	2,144	2,115
% Exams Scoring 3 or Higher	65%	71%	69%	71%	65%

Dual-enrollment and dual-credit are not measured consistently across the state. This lack of consistency, particularly with regard to transcripting, means that current data is unreliable or unavailable. The OCHE has surveyed individual two-year programs to attempt to determine baseline data for existing dual-enrollment & credit, but the response rate for this survey was low. Consequently, no reliable baseline data exists as to the current extent of dual-enrollment & credit in the state.

A dual-enrollment task force has been convened by the Board of Education P-20 Committee to review current status and to recommend policy that would provide consistency and standardization in dual-enrollment offerings. Three areas of concern remain:

- Courses to be offered;
- K-12 licensure of postsecondary faculty; and
- Compliance with ARM 10.55.907 for distance delivery.

Until this task force resolves these major policy issues, and better data are available for current dualenrollment & credit participation, it is not possible to set meaningful goals in this area.

#### Goals for 2006-2007:

- Develop reliable data within the Student Data Warehouse to measure dual-enrollment & credit across the state;
- Continue working with K-12 to reach agreement on the major policy impediments to expanding dual-enrollment & credit; and
- Establish subsequent goals for 2007-2010 based on this baseline data.

#### 4) Increase high school graduation rates.

Table 1.4.4

#### Public High School Graduation Rate

Percentage of 9th Graders Graduating from High School Four Years Later

States	High School Graduating Classes						
Ctates	1997-98	1999-00	2001-02	2003-04			
Montana	80%	78%	78%	79%			
WICHE States	70%	69%	70%	72%			

source: higheredinfo.org; Tom Mortenson Postsecondary Opportunity, 2003-04 data obtained from NCES Digest of Education Statistics Note: calculations for WICHE states exclude CA

Goal I (5): Increase postsecondary enrollment of traditional and non-traditional students through expanded outreach programs, evening/weekend programs, and 2-year programs.

#### Background

Despite Montana's relatively low wages, our state has many high-paying jobs that go unfilled – in health care, construction, manufacturing, for example – due to a shortage of appropriately trained workers. A fundamental characteristic of the global and knowledge-based economy is that workers must be highly skilled in order to have the high productivity needed to command growing wages. This requires a good entry-level skill base and continual upgrading of skills over time as technology in the workplace changes – at an ever increasing rate. Certainly, some of this training is provided by employers in the workplace. But increasingly, due to increasing costs and complexity, businesses across the country are relying on a region's higher education system to be active partners in providing the training needed.

The state's demographics are also changing rapidly. Over the next two decades, we will have about 1,500 fewer high school graduates <u>per year</u> than we do today. It is simply not possible for the university system to sustain itself or our growing economy if we continue to rely on the traditional pipeline of students. Our campuses must expand outreach to non-traditional students, who are frequently place-bound or in rural areas, if they are to continue to support the economic growth of the state.

#### 1. Increase enrollment in two-year programs.

Table 1.5.1

## Enrollment at 2-year Institutions Student FTE

Mantana IInimanitu Sustan		Fiscal Years									
Montana University System Educational Units	2000	2001	2002	2003	2004	2005	2006	2007 estimate	2010 projected		
Colleges of Technology											
Billings COT	509	474	509	580	660	668	668	699	770		
Great Falls COT	766	834	952	1,053	1,098	1,093	1,186	1,271	1,593		
Missoula COT	776	797	803	886	895	916	1,019	1,095	1,255		
MT Tech COT	310	285	295	233	260	280	303	322	360		
Helena COT	704	724	736	738	749	684	733	743	776		
Total COT	3,065	3,114	3,295	3,490	3,662	3,641	3,910	4,130	4,754		
Year-to-year % change		1.6%	5.8%	5.9%	4.9%	-0.6%	7.4%	5.6%	5.0%		
Community Colleges											
Dawson CC	429	413	445	415	450	497	500	545	438		
Flathead Valley CC	1,186	1,174	1,289	1,414	1,642	1,457	1,369	1,625	1,545		
Miles CC	465	506	509	473	509	542	469	550	727		
Total CC's	2,080	2,093	2,243	2,302	2,601	2,496	2,338	2,720	2,709		
Year-to-year % change		0.6%	7.2%	2.6%	13.0%	-4.0%	-6.3%	16.3%	-0.1%		

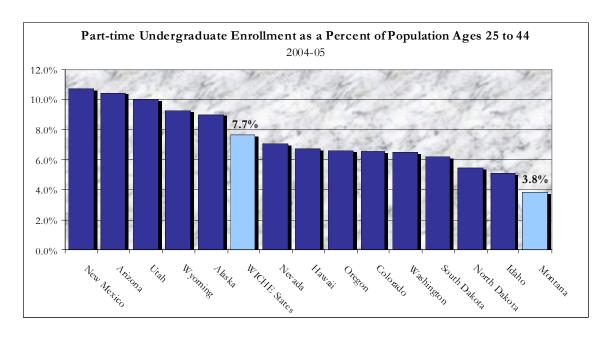
source: MUS Official Enrollment Report; 2007 to 2010 percent change is an average annual percent change

# 2. Increase programs and classes for non-traditional students, including evening and weekend programs.

Part-time Undergraduate Enrollment as a Percent of Population Ages 25 to 44 2000-01 through 2004-05

States	2000-01	2001-02	2002-02	2003-04	2004-05	2006-07 (est.)	2009-10 (goal)
WICHE States	7.4%	7.4%	7.7%	7.7%	7.7%		
Montana	3.3%	3.7%	3.7%	4.0%	3.8%		

source: NCES, IPEDS Fall Enrollment Survey; U.S. Census Bureau Note: calculations for WICHE states represent a weighted average excluding CA



# Goal I (6): Improve distance and on-line learning by coordinating online delivery of education across the entire Montana University System.

#### **Background**

The current method of providing distance and distributed courses and programs in Montana is decentralized. The Montana University System provides an electronic catalogue of distance education courses offered by system campuses, but that catalogue is essentially an electronic link to each campus and its own, individual description of distance opportunities available at that campus. Each institution within the Montana University System decides which programs and courses will be offered in a distance format. Each institution also decides how and where those programs will be offered and in which medium, with only modest consultation with other educational institutions throughout the State. Most of the institutions in the Montana University System also handle their own support service programs, such as admissions, registration, tuition, financial aid, and advising. Disparities are confusing and costly for students, especially students who use the offerings of more than one campus to earn their degree or to supplement their already-acquired credentials.

There is no common approach among distance education providers to address the crucial issues affecting affordability and quality – tuition, duplication, articulation agreements between programs or institutions, transfer of coursework, and best practices in teaching, assessment, and support services. There is very little consistency in services or support for distance education students, who often do their coursework in an isolated setting far from the institution providing the classes. Consequently, Montana is not using technology to the fullest advantage in providing more accessible and efficient education to our citizens.

#### How we will measure our progress:

The Director of Distance Education Business Development will work with the Distance Learning Advisory Council to implement the goals for 2006-2007 and develop appropriate subsequent measures of progress for 2007-2010.

#### Goals for 2006 - June 2007:

- Develop an accurate and updated inventory of: 1) degree programs, and 2) certificate programs, by institution, at the undergraduate and graduate levels.
- Develop an inventory of credit courses, CPE courses, professional courses, and non-credit courses, by institution.
- Develop an inventory of how programs and courses are delivered by each institution, both organizationally and by mode of delivery, and the tuition and fee structures for each, by institution.
- Survey all campuses to determine web-based student services and support offered for distance learning students.

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#### (continued)

- Survey all campuses to determine how distance learning courses are being identified and reported, how
  they appear on the student transcripts, and whether distance education credit hour generation is being
  reported for FTE formula funding purposes.
- Identify, by campus, the barriers, rewards, incentives, and opportunities for grant writing and academic program collaborations that could support expanded distance education.
- Create and implement a common portal or gateway for a system approach to distance learning opportunities for the citizens of Montana, beginning with general education core courses.
- Develop and implement at least two collaborative efforts to meet academic program needs of students, businesses, and/or citizens, using existing resources in the process. The initial focus will be on opportunities for teacher education (including Indian Education for All training) and healthcare worker education.
- Ensure distance education programs at all campuses show evidence of supporting best practices in on-line education as identified by accrediting bodies.
- Develop subsequent distance education goals for 2007-2010.

# Goal II: Assist in the expansion and improvement of the state's economy through the development of high value jobs and the diversification of the economic base.

The state ranks 50<sup>th</sup> (lowest) in average wages and is generally in the bottom ten states in terms of per capita income, household income and other measures of wealth per person. But with unemployment continuing near all-time lows, it is not the number of jobs in the state that need to increase. Montana needs more high-paying jobs.

In an economy that continues to globalize, Montana companies must compete with lower wage economies around the world. Higher wages can only be sustained if the value of a person's work is increased. Global competitiveness demands that, over the long-term, wages will reflect the value of the labor performed. The term for this is "productivity" and there are fundamentally two ways it increases – by increasing the skill level of the worker and/or through the use of new technology. In both of these areas, the Montana University System plays a large role in advancing the state's economy and creating more high-paying jobs.

#### Strategic initiatives we will undertake to achieve this goal

- Expand education for healthcare workers and coordinate programs across the university system to ensure a comprehensive approach to worker shortages in the state.
- Continue to invest in critical equipment and technology, particularly those that train workers for high demand occupations within the Montana economy.
- Continue to support the use of indirect cost recovery by the research campuses to support expanded infrastructure for research and commercialization.
- Continue to implement two-year program equipment and program expansion (\$5 million in 2006-07 biennium) and support additional one-time-only appropriations for continued equipment and program expansion.
- Develop the necessary inter-agency agreements and create a comprehensive statewide education tracking system for students from K-12 through postsecondary education and into the workforce.

Note: One-Time-Only Requests for the 2008-09 biennium that have not yet been approved by the Executive Budget Office or the Board of Regents are not included.

## Goal II (1): Increase responsiveness to workforce development needs by expanding and developing programs in high demand fields in the state.

#### **Background**

The availability of a skilled workforce has become one of the most important issues for attracting, retaining, and growing businesses that provide higher paying jobs. Workforce skill level is a key driver of innovation and productivity improvement across <u>all industries</u>. The success of Montana's economy depends on our ability to provide the skilled workers needed for jobs that exist, or will exist, in our state. The Montana University System is by far the largest source of educated and trained workers for our businesses. If our programs are not responsive to the changing needs of Montana businesses, we cannot hope to retain our citizens or grow our income levels.

In an environment of limited funding support, however, it is critical that we align limited resources for public higher education with the needs of the economy. Traditional liberal arts education must remain a foundation of the system, because the general skills it imparts are central to business innovation and individual success. And, given the expenses involved in technical education, there simply are not enough resources to provide high-quality training for every job that might exist in the state. The highest priority must be given to student and employer demands in fields where current or projected job creation outstrips the capacity of the higher education system to produce trained graduates.

Until recently, however, there has been no consistent system-wide, on-going evaluation of the educational needs of business and industry, K-12 students or the average citizen. As a consequence, the State had no way to determine the unmet needs of employers or the missing skills of workers. With research conducted by the University of Montana Bureau of Business and Economic Research at the request of the Board of Regents, we now have this data and can track the progress of the university system in providing appropriately trained workers for our businesses.

#### 1) Increase employer satisfaction with graduates.

Prior to 2006, the Montana University System has not had a systematic means to measure employer satisfaction, although most campuses evaluated this in some way. Using the recently completed statewide business survey commissioned by the Board of Regents, some baseline information is now available on business' perception of higher education in general, and the responsiveness of the two-year programs in particular. While this data is valuable, it does not provide comprehensive information on the number and quality of the Montana University System's programs which train workers for our state's businesses.

#### Goals for 2006-2007:

- The Two-Year Council will develop measures to consistently measure the number of businesses and students utilizing continuing education or customized training in the MUS; and
- The Two-Year Council will develop recommendations to the Board of Regents on the best measures from the statewide business survey to evaluate responsiveness to Montana businesses; and
- The Two-Year Council will develop recommendations for 2010 for continuing education, customized training, and business' satisfaction with MUS graduates.

# 2) Increase degrees and certificates awarded in high-demand occupational fields.

Table 2.1.2

#### MUS Degrees Awarded in Healthcare

Degrees	1994-95	1999-00	2004-05	<b>2006-07</b> (est.)	<b>2009-10</b> (goals)
2-year degrees & certificates	288	313	482		
4-year degrees & above	337	278	327		
Total	625	591	809		

source: IPEDS Completions Survey healthcare equals CIP code 51.00 note: data include community colleges

The Board of Regents has identified healthcare and construction occupations as the top priorities for training workers in high-demand occupations.

Measuring healthcare certificates and degrees is relatively straightforward and done consistently across campuses. Historical data are available and a reasonable proxy for overall level of training provided by the MUS for this industry. The Board of Regents has recently convened a Healthcare Task Force to evaluate and prioritize efforts to increase the number of healthcare workers in the state. This task force will work through 2006-2007 to help the Board set goals for the number and type of healthcare workers the MUS should produce to meet the priority needs of the state in the next decade.

Construction trades education is not easily measured for two principle reasons. First, many workers receive training which does not necessarily lead to a formal certificate or degree. Second, the definition of what types of programs are categorized as construction-trades related is not well developed and consistently applied across the MUS. Historical data is therefore not readily available in a useable form. Much better data, by occupation, must be developed before meaningful baseline information or goals can be determined.

#### Goals for 2006-2007:

- With the support of the Healthcare Advisory Group, develop goals for healthcare worker training;
   and
- Develop a consistent definition of what programs and training are included in construction trades across the MUS and set prospective goals; and
- Work with the MHA (Montana Hospitals) and the Montana Contractor's Association to develop survey data, and long-term goals, on the performance of MUS students once they enter the workforce.

#### 3) Increase job placement rates.

OCHE is working to establish a systematic mechanism for tracking students from college to Montana's workforce through a linkage of postsecondary data to the unemployment insurance wage database. Under the guidelines of the Family Educational and Privacy Rights Act (FERPA), numerous states have set precedent in successfully developing student tracking systems between multiple state agencies for the purpose of evaluating and improving programs.

#### (continued)

OCHE currently receives a match of 2-year program completers with workforce records for the purpose of measuring Carl D. Perkins performance indicators. These data yield useful information, however the effort must be expanded to include students completing programs at all levels throughout the MUS.

In order to build a comprehensive picture, it is essential to develop a statewide tracking system capable of following cohorts of students from high school, through college, and into the workforce. Currently, data sources and opportunities exist that could allow for the exchange of student and workforce information between the Office of Public Instruction (OPI), Montana University System (MUS), and the Department of Labor. Each entity is responsible for a critical portion of the information needed to track students:

- OPI is establishing a statewide data system capable of providing extracts of recent high school graduates;
- MUS administers a centralized student data warehouse that provides postsecondary enrollment tracking; and
- The Montana Department of Labor & Industry stores employment records that identify entry into Montana's workforce.

Given these existing data sources and opportunities for sharing information, it is critical that these three state agencies work together to exchange the necessary data to develop a tracking system capable of providing a comprehensive view of students' progression and entry into the workforce.

#### Goals for 2006-2007:

- Develop the necessary inter-agency agreements and create a comprehensive statewide tracking system; and
- Establish subsequent goals for 2007-2010 based on this baseline data.

#### 4) Grow enrollment, for certificates and degrees, in 2-year programs.

Table 2.1.4

#### **Associate Degrees Conferred**

(Associate of Arts, Associate of Science, & Associate of Applied Science) 1999-00 to 2004-05

Institutional	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2006-07	2009-10
Type							(est.)	(goal)
Colleges of Technology	632	674	687	764	800	772		
Community Colleges	450	392	408	448	511	523		
Integrated 2-year Programs*	153	145	148	188	175	166		
Total	1235	1211	1243	1400	1486	1461		
% Change (annual)		-2%	3%	13%	6%	-2%		

\*UM-Western & MSU-Northern source: IPEDS Completions Survey

#### Goal for 2006-2007:

The Two-Year Council will develop appropriate goals for 2010 regarding AA, AS, and AAS degrees conferred by Montana two-year programs.

Goal II (2): Establish collaborative programs among institutions, the private sector, and the state to expand research, technology transfer, the commercialization of new technologies, and the development of our entrepreneurs.

#### **Background**

In a report recently published by the Office of the Governor, Montana is home to 2,721 advanced technology establishments of which 626 have five or more employees. These companies directly employ a total of almost 12,000 individuals whose earnings are significantly higher than the state's annual average wage of about \$25,700. Many of these firms already have strong relationships with the Montana University System and all rely on continuous innovation and the deployment of new technology to be successful.

Because Montana lacks the large corporate headquarters that typically conduct private sector research, a large portion of our state's expenditures for research derive from the university system or its partnerships with our state's businesses. This research is in itself a large industry, putting approximately \$175 million (2005) of "outside" money directly into the Montana economy. Growing research in the university system increases high-paying jobs. To fully leverage this research, however, we must continue to work hard to commercialize that innovation in our own economy.

Of course, no quality research university will ever be able to find a home for all its technology in the local economy. Cutting edge research is by its nature global, and Montana will never have all the resident companies needed to commercialize all of our research. But the Montana University System does generate considerable intellectual property that is suitable for development within the state. With very limited resources, the university system has already established a number of quite successful partnerships with Montana businesses. What the state does not have is many resources to identify and coordinate new, or currently unidentified, opportunities – particularly with businesses that are not physically located near one of the major research campuses. There are also very few resources available to coordinate state-wide efforts between the various MUS technology transfer offices – so businesses located near one campus, that might benefit from technology residing at a different campus, have a difficult time finding the needed resources.

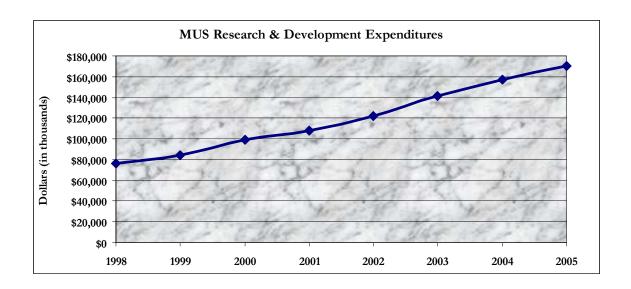
#### 1) Increase research & development receipts and expenditures.

Table 2.2.1

MUS Research & Development Expenditures

MUS R&D Expenditures	2005	2010	
WOS R&D Experiorures		(goal)	
Estimated R&D Expenditures	\$175,000,000	\$240,000,000	

source:1998-2003 NSF, 2004 & 2005 estimated by MUS



#### 2) Increase technology licenses with Montana businesses.

Table 2.2.2 Technology Transfer Activity, 2000-2005

Technology Transfer	Total	2006-2010
Activities	2000-2005	(goal)
Patents Issued	197	240
Active Licenses (Total)	150	180
Active Licenses (MT Companies)	83	110
Percent Licenses w/ MT Companies	55%	59%
License/Patent Revenues	\$527,484	\$1,900,000
Reimbursed Patent Costs from Licenses	\$731,595	\$2,000,000

source: MUS Institutional Reports

License/patent revenues are cumulative gross revenues during period, but do not include reimbursed patent costs. Reimbursed patent costs are licensee payments to cover direct costs by the institution for filing & maintaining patents.

# Goal III: Improve institutional and system efficiency and effectiveness.

The Montana University System is an almost \$1 billion per year enterprise providing employment for about 7,000 Montanans. Clearly, in any enterprise of this size there will be some inefficiencies and imperfections. The university system realizes, however, that unless it does everything reasonably possible to be effective with its current resources it cannot credibly ask for much-needed higher levels of sustained funding and support. Even though General Fund appropriations comprise only about 15% of total university system revenues, the taxpayers still contribute about \$150 million per year ('06 biennium) and have a right to demand accountability for this spending. Our students, who bear an increasing portion of the cost of their public education, also deserve a system that provides a high quality education as efficiently as possible and allows them to have reasonable portability among the institutions in the system.

A critical ingredient of accountability is being able to accurately measure changes in the system and progress toward long-term goals. This includes the ability to measure student success and financial efficiency. While the individual campuses have extensive data, the Commissioner and Regents have very little quality system-wide data, which in turn makes it hard to track system-wide changes or progress. What data do exist are usually compiled manually from information provided by the respective campuses. It is difficult to track system performance and nearly impossible to evaluate time series data. The problem only worsens with the adoption of this strategic plan that, if it is to be credible, requires tracking progress toward meaningful long-term performance goals.

#### Strategic initiatives we will undertake to achieve this goal

- Implement a student transferability and data initiative beginning in 2006 and continuing through the 2008-09 biennium to improve student credit transferability among institutions.
- Create and maintain an integrated student data system.
- Complete a major revision of the MUS funding allocation model by the end of 2006.
- Maintain the proportion of spending for instruction, academic support, and student services (aggregated) above 70% of total expenditures.

Note: One-Time-Only Requests for the 2008-09 biennium that have not yet been approved by the Executive Budget Office or the Board of Regents are not included.

Goal III (1): Improve the accuracy, consistency and accessibility of system data, including the continued development of a comprehensive data warehouse.

#### Background

Good policy begins with good information. Policymakers, inside and outside the university system, need to have reliable data that will provide an accurate picture of performance and conditions in their state.

Student information can be particularly complicated. Without comprehensive, Montana-specific data it is difficult to determine which citizens are being precluded from a postsecondary education, or are not successful in completing a postsecondary education. Current information about Montana's postsecondary education "continuum" is not readily available or routinely reported. Montana lacks a student unit record system to track students throughout their educational careers and data are not consistently disaggregated to allow an analysis of the participation and performance of sub-groups such as low-income or minority students. This makes targeting high-need segments of the Montana population difficult. The University System must be poised to be able to combine the records from the Office of Public Instruction's Education Data Warehouse and Student Level Record System project with higher education student records. This is the only way we will be able to evaluate the effectiveness of Montana's entire P-20 education system.

The current standard reports from the MUS Student Data Warehouse focus on enrollment—at either the census date (third week) or end of term. From that data we are able to know the enrollment, residency status, country and county of origin, age, race, and other general demographic information regarding the MUS student population. In order for us to do a meaningful assessment of <a href="system">system</a> student achievement, we will also need to be able to determine accurately (and readily) student data such as entering test scores, remedial course work, GPA, student progress, matriculation, retention, and completions. These data are captured in the campuses' student data warehouses, but is not easily accessible from the system data warehouse.

The MUS at least has a student data warehouse, albeit one that needs improvements. Data related to finance (budgets, revenues, expenses, accounting), payroll, and financial aid are available only through the campuses' systems and are not available in a central, electronically accessible location. These additional data elements (finance, HR, and financial aid) are critical pieces of performance evaluation and accountability measures.

#### How we will measure our progress:

#### Goals for 2006-07:

- Establish position for an institutional information and research professional at OCHE to provide leadership for system-wide data issues.
- Enhance/expand OCHE reporting capabilities using the MUS student data warehouse, to include a systematic means for tracking students, measuring student success, and addressing transferability issues.
- Expand OCHE's student data warehouse to encompass all public, postsecondary enrollments in Montana, including student records from the community colleges.
- Develop linkages between K-12, postsecondary, and labor information in order to produce a method for annually tracking student cohorts from high school to college to the workforce.
- Design and implement financial, human resource, and financial aid components of OCHE's data warehouse.

#### Goal III (2): Deliver efficient and coordinated services.

#### **Background**

In order for the university system to maintain credibility and continually improve its ability to serve the citizens of this state it must be efficient in the use of its resources. But measuring efficiency in higher education can be difficult. Typical business-like measures of increasing through-put and "profit center" accounting can have significant and deleterious effects on quality. Yet, the taxpayers and our students deserve accountability for the way in which we spend their money.

One reasonable measure of financial accountability is how much it costs to educate a student over time and relative to our peer institutions. While these are certainly imperfect measures of efficiency, the Montana University System needs to evaluate its costs relative to other institutions that have missions similar to our own. The system must also be diligent in ensuring that it allocates the resources it does have in a way that remains focused on its primary missions. A common criticism of all public education, higher education and K-12, is that too much money is spent on overhead or administration and not enough for student education. True or not, this issue demands that higher education evaluate constantly and communicate effectively the manner in which it allocates and uses its resources.

Another measure of efficiency is how well the university system is coordinating among its various campuses. A good measure of this is how effectively students can move between these campuses. Montana has eight university system campuses, three community colleges, and seven tribal colleges located throughout the state. It is important to maintain these campuses because we have a geographically large state and proximity of a postsecondary institution correlates positively with participation in higher education. A consequence of this is, however, that we have a number of relatively small institutions that cannot possibly offer all the training and education that every student at that campus requires. In our state more than 60% of bachelor degree graduates have transferred between institutions at least once.

Of course, student transfers often involve a change of major or other personal choices that can make previous coursework bear relatively little relationship to the new course of study. However, students and parents do have the right to expect that similar courses at the various campuses within the system are given similar recognition across the state. Transferability indicates the ease with which students' previous courses move between institutions and are applied to new requirements of a new institution. It is a key measure of how well our campuses are operating efficiently as a system for the benefit of our students.

## 1) Expenditures per student relative to peer institutions and history.

Table 3.2.1(a)

#### Expenditures per Student FTE

4-year, Public Institutions

PEPB Peer States	2001-02	2002-03	2003-04	2004-05	2006-07 (est.)	<b>2009-10</b> (goal)
Colorado	\$8,427	\$8,142	\$8,116	\$8,214		
Idaho	11,080	10,524	10,647	11,433		
Minnesota	13,570	13,535	13,334	13,169		
Montana	8,306	8,745	9,151	9,570	\$10,253	\$11,726
North Dakota	9,453	9,670	9,697	11,000		
Oregon	11,889	11,733	11,925	12,484		
South Dakota	8,569	8,739	8,981	9,630		
Utah	9,660	9,314	10,047	10,626		
Washington	13,432	13,361	13,308	13,940		
Wyoming	13,464	14,555	14,979	15,375		
PEPB States (avg.)	\$10,785	\$10,832	\$11,018	\$11,510		

source: IPEDS Finance Survey

Note: Expenditures represent funds derived from state and local appropriations, as well as tuition and fees. 2004-05 data for CO & WY were not available on 5/4/06, as a result, they are estimates based on the 2005 SHEEO SHEF report and 3-year weighted averages.

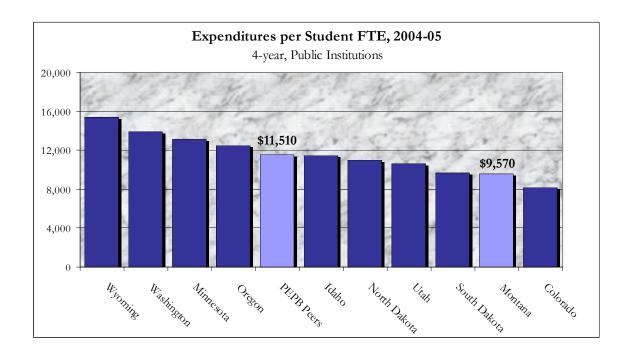


Table 3.2.1(b)

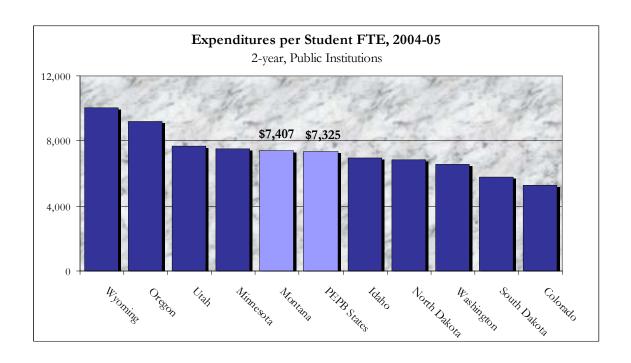
#### Expenditures per Student FTE

2-year, Public Institutions

PEPB Peer States	2001-02	2002-03	2003-04	2004-05	2006-07 (est.)	2009-10 (goal)
Colorado	\$5,677	\$5,038	\$5,186	\$5,248		
Idaho	8,372	6,853	6,782	6,966		
Minnesota	8,312	7,907	7,613	7,502		
Montana	7,057	6,752	7,038	7,407	\$7,145	\$7,125
North Dakota	6,428	6,726	6,598	6,839		
Oregon	9,260	7,624	10,466	9,203		
South Dakota	5,226	5,335	5,417	5,782		
Utah	7,092	7,013	7,370	7,676		
Washington	6,774	6,847	6,261	6,563		
Wyoming	9,521	9,790	9,297	10,061		
PEPB States (avg.)	7,372	6,989	7,203	7,325		

source: IPEDS Finance Survey

Note: Expenditures represent state and local appropriations, as well as tuition and fees; MT totals include: MSU-GF, UM-Helena, MCC, DCC, & FVCC; MT-TECH-COT, UM-Missoula-COT & MSU-Billings-COT IPEDS financial information is included with the 4-year institutions; 2004-05 data for CO were not available on 5/4/06, as a result an



# 2) Percentage of expenditures in instruction, research, public service, academic support, student services, institutional support, plant operation and maintenance, and scholarships.

Table 3.2.2 MUS Expenditures by Category

Expenditure Categories	1985	1995	2005
Instruction	53%	54%	52%
Research	1%	1%	1%
Public Service	0%	1%	1%
Academic Support	11%	11%	12%
Student Services	9%	9%	7%
Institutional Support	10%	9%	9%
Operation of Plant	13%	12%	12%
Scholarships/Fellowships/Waivers	2%	4%	7%

source: OCHE Operating Budgets

**2010 Goal:** Instruction + Academic Support + Student Services remains above 70%

## 3) Improve articulation and transferability among all 2-year and 4- year institutions, including community colleges and tribal colleges.

## The following <u>objectives</u> for transferability were adopted at the March 2006 meeting of the Board of Regents

- Facilitate the transfer process for students who start at a 2-year institution and decide to continue their education at a 4-year institution.
- Develop multiple pathways that transfer students can follow to complete their postsecondary
  educational plans. Those pathways may include course equivalency guides, articulation agreements,
  common learning outcomes, common coursework or course content, "block" transfers, and other
  creative options.
- Reduce the number of credits that transfer students need to complete so that the number is as close to the total number of credits required to earn a degree as possible. (i.e. 60-72 credits for an associate degree and 120-128 for a baccalaureate degree, depending on the degree program.)
- Develop policies and procedures that clarify and simplify the transfer process; and provide complete and comprehensive transfer information for students in the Montana University System.

## By the end of 2006, we will develop specific measurement goals for 2007-2010 in the following areas:

- Percent of students earning "transfer" associate degrees\* who transfer to a MUS 4-year institution in the semester immediately following graduation.
- Percent of students earning "transfer" associate degrees\* who transfer to a 4-year MUS institution in the semester immediately following graduation and graduate from college with a Bachelor's degree within three years of transferring.
- Credits to Degree: comparison of total credits earned by transfer students at the time of graduation to the average number earned by non-transfer students.

<sup>\*</sup>Associate of Arts, Associate of Science, & Associate of Business

## Goal III (3): Biennial review/update of the budget allocation model consistent with state and system policy goals and objectives.

#### Background

The Montana Legislature allocates the vast majority of funding for our education units in a "lump sum" that is then allocated by the Regents to the individual institutions within the system. How these funds are allocated is central to every strategic objective of the Board. The current allocation model is more than a decade old and is, at best, complicated and difficult to understand. In order to achieve the goals and objectives in this strategic plan, the basic funding allocation model must be significantly revised. To be an effective tool for achieving our strategic goals, the new allocation model should, at a minimum:

- Focus on financing for the state <u>system</u>, not only funding for the individual campuses;
- Be transparent as to the policy choices of the Regents, Legislature, and executive branch;
- Provide a framework for dealing with allocations to institutions, tuition revenues, financial aid, and mandatory fee waivers;
- Have a specific fund dedicated to furthering Regents' priorities;
- Reward institutions for aggressively seeking revenues from sources other than students and the state;
- Protect institutional viability by moderating the short-term effects of enrollment changes;
- Provide incentives for institutions to collaborate as a system;
- Ensure equity of funding among all institutions;
- Maintain an adequate base of funding and education quality for all institutions;
- Maintain a differential between 2-year and 4-year tuition.

#### How we will measure our progress:

The new allocation model will be completed and in use for allocating funds throughout the university system in the 2008-2009 biennium.